

CLAIMS

1. A rotary compressor comprising:

a compression mechanism (20) including a cylinder (21) having a cylinder chamber
5 (C) (C1, C2), a piston (22) accommodated in the cylinder chamber (C) (C1, C2)
eccentrically with respect to the cylinder (21), and a blade (23) arranged in the cylinder
chamber (C) (C1, C2) and sectioning the cylinder chamber (C) (C1, C2) into a high
pressure chamber (C-Hp) (C1-Hp, C2-Hp) and a low pressure chamber (C-Lp) (C1-Lp,
C2-Lp), the cylinder (21) and the piston (22) eccentrically rotating relative to each other;

10 a motor (30) for driving the compression mechanism (20); and

a casing (10) for accommodating the compression mechanism (20) and the motor
(30),

wherein a low pressure space (S1) communicating with a suction side of the
compression mechanism (20) and a high pressure space (S2) communicating with a
15 discharge side of the compression mechanism (20) are formed in the casing (10), and

the casing (10) is provided with a suction pipe (14) connected to the low pressure
space (S1) side of the casing (10) and a discharge pipe (15) connected to the high pressure
space (S2) side thereof.

2. The rotary compressor of Claim 1, wherein

20 two spaces are formed in the casing (10) with the compression mechanism (20)
interposed therebetween, one of the two spaces is the high pressure space (S1), and the
other thereof is the low pressure space (S2).

3. The rotary compressor of Claim 1, wherein

the motor (30) is disposed in the high pressure space (S2).

25 4. The rotary compressor of Claim 1, wherein

the high pressure space (S2) is formed below the compression mechanism (30), and
an oil sump (19) for accumulating lubrication oil is formed in the high pressure space (S2).

5. The rotary compressor of Claim 1, wherein

the outer peripheral face of the compression mechanism (20) is surrounded by the low pressure space (S1).

6. The rotary compressor of Claim 1, wherein

5 the cylinder chamber (C1, C2) is formed in an annular shape in section at a right angle in an axial direction, and

the piston (22) is formed of an annular piston (22) arranged in the cylinder chamber (C1, C2) and sectioning the cylinder chamber (C1, C2) into an outer cylinder chamber (C1) and an inner cylinder chamber (C2).

10 7. The rotary compressor of Claim 6, wherein

the blade (23) is formed continuously with the cylinder (21),

the rotary compressor further includes a coupling member (27) through which the annular piston (22) and the blade (23) are movably coupled to each other, and

15 the coupling member (27) includes a first sliding face (P1) corresponding to the annular piston (22) and a second sliding face (P2) corresponding to the blade (23).

8. The rotary compressor of Claim 7, wherein

the annular piston (22) has a shape of C obtained by cutting an annular ring,

20 the blade (23) is formed to extend from an inner peripheral wall surface of the annular cylinder chamber (C1, C2) to an outer peripheral wall surface thereof while being inserted through the cut part of the annular piston (22), and

the coupling member (27) is a swing bush (27) having an arc-shaped outer peripheral face slidably supported in the cut part of the annular piston (22), a blade groove (28) being formed therein for supporting the blade (23) to allow the blade (23) to move back and forth.

25 9. The rotary compressor of Claim 6 further comprising

a drive shaft (33) for driving the compression mechanism (20),

wherein the drive shaft (33) comprises an eccentric portion (33a) that is eccentric

from the rotation center, the eccentric portion (33a) being coupled to the cylinder (21) or the annular piston (22), and

parts of the drive shaft (33) located to both longitudinal sides of the eccentric portion (33a) are supported through the bearing portions (16a, 17a) in the casing (10).

5 10. The rotary compressor of Claim 1, wherein

the cylinder chamber (C) has a circular shape in section at a right angle in an axial direction, and

the piston (22) is formed of a circular piston (22) arranged in the cylinder chamber (C).